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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/803,705	03/09/2001	Craig Anthony Farrell	NDG1160	6325
7590	10/27/2004		EXAMINER	
Brown, Raysman, Millstein, Felder & Steiner LLP 900 Third Avenue New York, NY 10022			KHUONG, LEE T	
			ART UNIT	PAPER NUMBER
			2665	

DATE MAILED: 10/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/803,705

Applicant(s)

FARRELL ET AL.

Examiner

Lee Khuong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 May 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>07/23/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Aggarwal et al (US 5,675,741) hereinafter is referred as Aggarwal.

3. **Regarding claims 1 and 15,**

Aggarwal teaches a method and apparatus for application route discovery comprising:

configuring each one of a sequence of application packets being transmitted over an application port to expire at one of a succession of nodes that form an application route from a source (query node #13) to a destination (source node #11, see Fig. 1 and Fig. 2, col. 3, lines 29- 41, Incremental TTL mechanism provides hops count with decrementing each router of one hop in TTL); and

receiving an error notification from each node at which an application packet expires to identify that node in the application route (see col. 3, lines 66, ICMP notification message).

4. **Regarding claim 2,**

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Aggarwal teaches *the method of claim 1, wherein configuring each application to expire further comprises configuring a time-to-live (TTL) field within each application packet* (see Fig. 4, col. 4, lines 26- 38, the TTL field in the query of SNMP is increased after it receives an ICMP responses: TTL_EXCEEDED or PORT_UNREACHABLE).

5. Regarding claim 3,

Aggarwal teaches *the method of claim 2, wherein the TTL field is decremented at each successive node in the application route until it reaches zero* (see col. 2, lines 5-6, TTL threshold is reached usually the default value is 30, meaning the route TTL value has decreased to ZERO additional hop).

6. Regarding claim 4,

Aggarwal teaches *the method of claim 3, wherein receiving an error notification occurs after the TTL in an application packet has reached zero* (see col. 2, lines 7-8, when TTL reaches zero value, it returns an ICMP time exceeded packet to its source).

7. Regarding claim 5,

Aggarwal teaches *the method of claim 2, wherein configuring the TTL field further includes incrementing by one each TTL field in successive application packets* (see col. 4, lines 26-35, incremental by one to the next hop router).

8. Regarding claim 6,

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Aggarwal teaches *the method of claim 1, further comprising setting the application port* (see col. 3, lines 36-37, set a socket in query node #13).

9. **Regarding claim 7,**

Aggarwal teaches *the method of claim 1, wherein the error notification is an ICMP "time exceeded" message* (see col. 4, line 10-11).

10. **Regarding claim 10,**

Aggarwal teaches *the method of claim 1, wherein each application packet is transmitted according to the user datagram protocol (UDP)* (see col. 3, line 65, UDP probe).

11. **Regarding claim 11,**

Aggarwal teaches *the method of claim 10, further comprising setting the application port* (see col. 3, lines 36-37, set a socket in query node #13).

12. **Regarding claim 12,**

Aggarwal teaches *the method of claim 11, further comprising changing the application port to the UDP ephemeral port when no error notification is received after transmission of an application packet* (see col. 4, lines 15-17).

14. **Regarding claim 13,**

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Aggarwal teaches *the method of claim 12, further comprising configuring an application packet being transmitted over the UDP ephemeral port to expire at the same node at which the previous application packet was set to expire* (see col. 4, lines 15-17, *retry_count*).

15. **Regarding claim 14,**

Aggarwal teaches *the method of claim 13, further comprising receiving, in response to the application packet transmitted over the UDP ephemeral port, an ICMP "destination unreachable" message to indicate that the destination port is not accessible, but that the destination host has been reached* (see col. 4, lines 22-25).

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aggarwal in view of Reichman (US 6,738,813).

18. **Regarding claims 8 and 9,**

Aggarwal teaches the method set forth in the rejection of claim 1.

Aggarwal does not disclose expressly *each application packet is transmitted according to the transmission control protocol (TCP), receiving a SYN/ACK message to*

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indicate that the destination node has been reached by an application packet in the sequence, and the entire application route has been discovered.

Reichman disclose monitoring hop delays with http packets over TCP layer (see col. 9, lines 42-46), returning a SYN/ACK message after the packet has reached its destination node (see col. 9, lines 47-48).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the route tracing techniques of Reichman with Aggarwal.

The suggestion/motivation for doing so would have been to provide the benefit of the HTTP packets less likely to be blocked by Internet firewalls.

Therefore, it would have been obvious to combine Reichman with Aggarwal to obtain the invention as specified in claim 8.

Conclusion

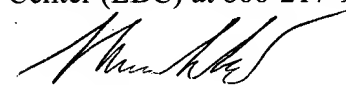
19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Stracke Jr. et al (US 6,047,330); Tappan (US 5,991,300); Katsube et al (US 6,501,756); Swildens et al (US 6,754,699); Feldman et al (US 6,130,889); Jain (US 2002/0112072) are cited to show system and method for application route discovery.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lee Khuong whose telephone number is 571-272-3157. The examiner can normally be reached on 9AM - 5PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Lee T. Khuong
Examiner
Art Unit 2665

DUCHO
PRIMARY EXAMINER


10-23-04